FIG 1

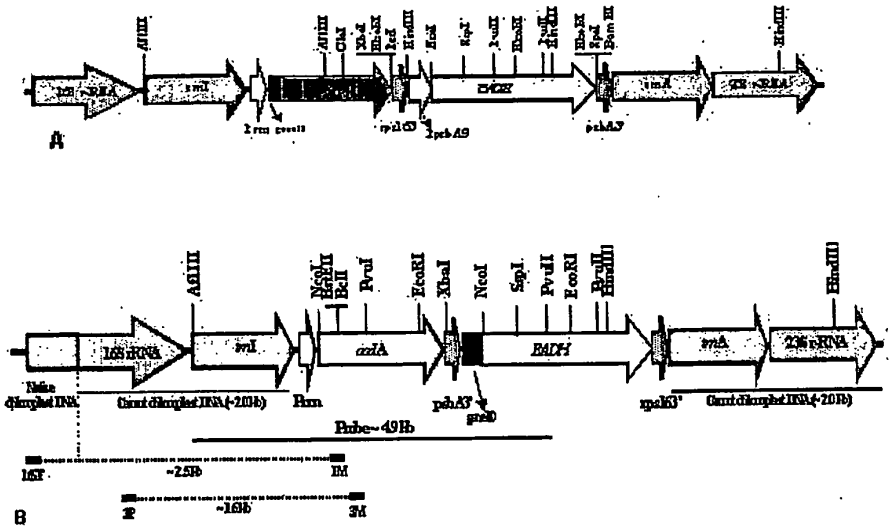


FIG 2

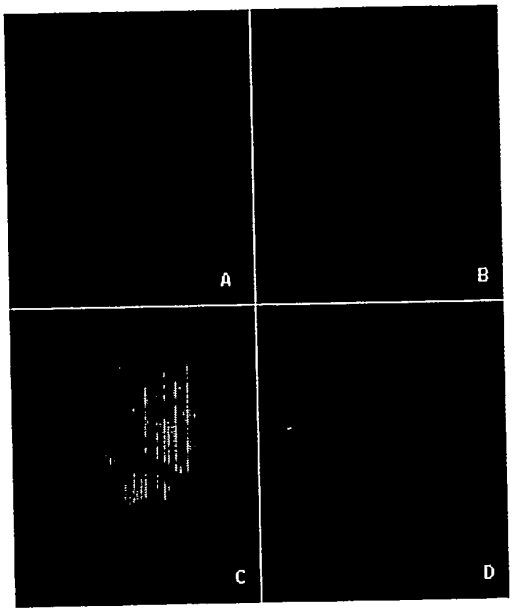
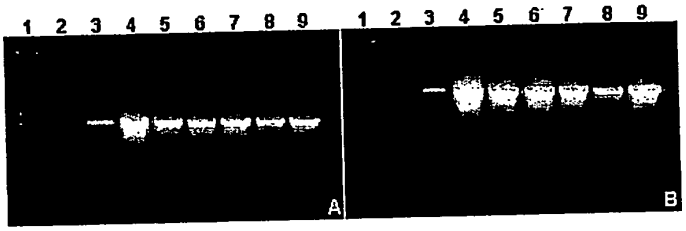


FIG 3

FIG 4



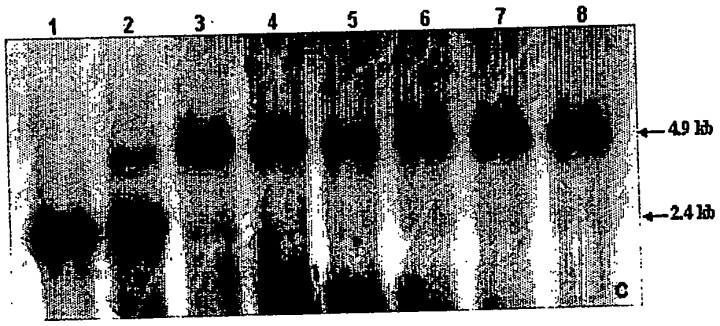
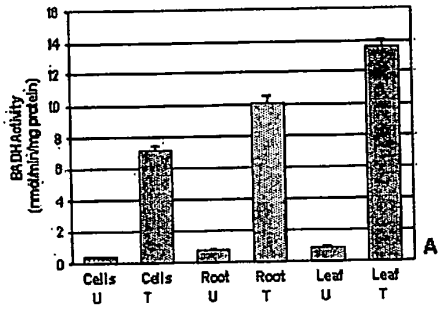


FIG 5


BADH Activity
(nmol/min/mg protein)
0
2
4
6
8
10
12
14
16
Cells U
Cells T
Root U
Root T
Leaf U
Leaf T
A

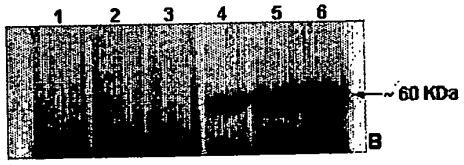

1
2
3
4
5
6
~60 KDa
B

FIG 6

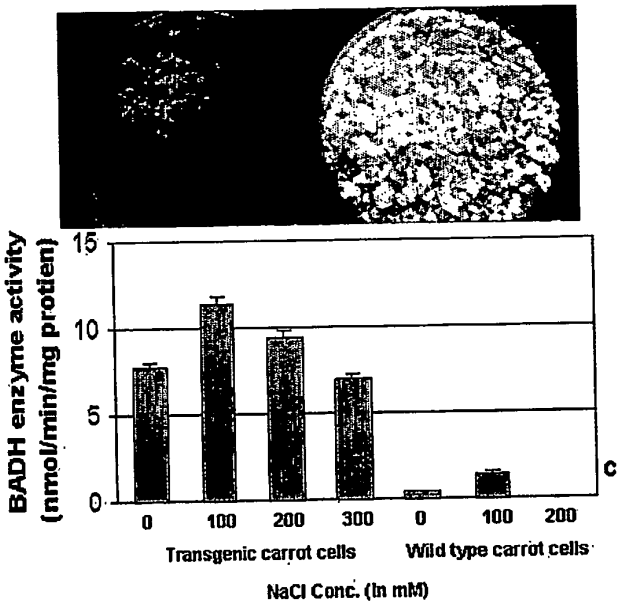

BADH enzyme activity
(nmol/min/mg protien)
15
10
5
0
0
100
200
300
0
100
200
Transgenic carrot cells
Wild type carrot cells
NaCl Conc. (In mM)

FIG 7

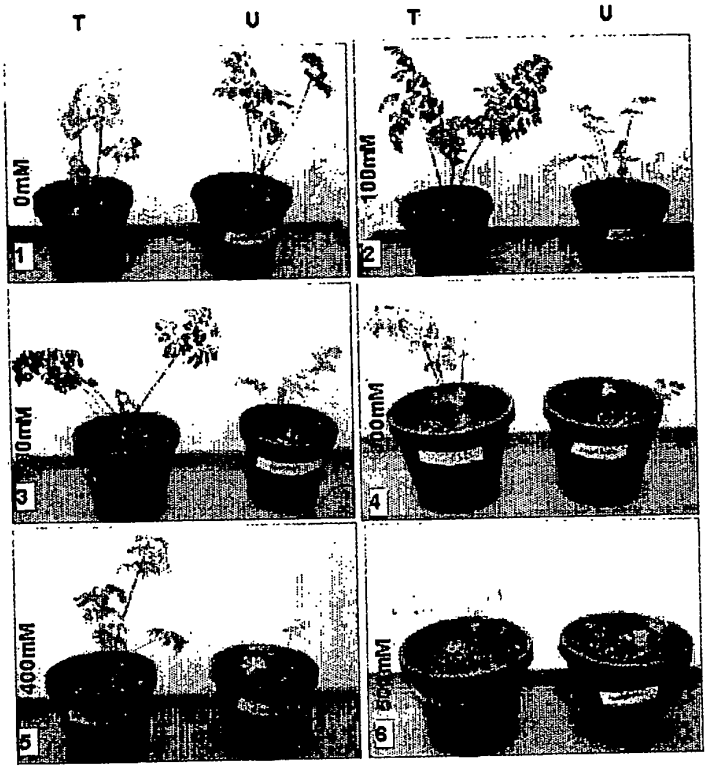
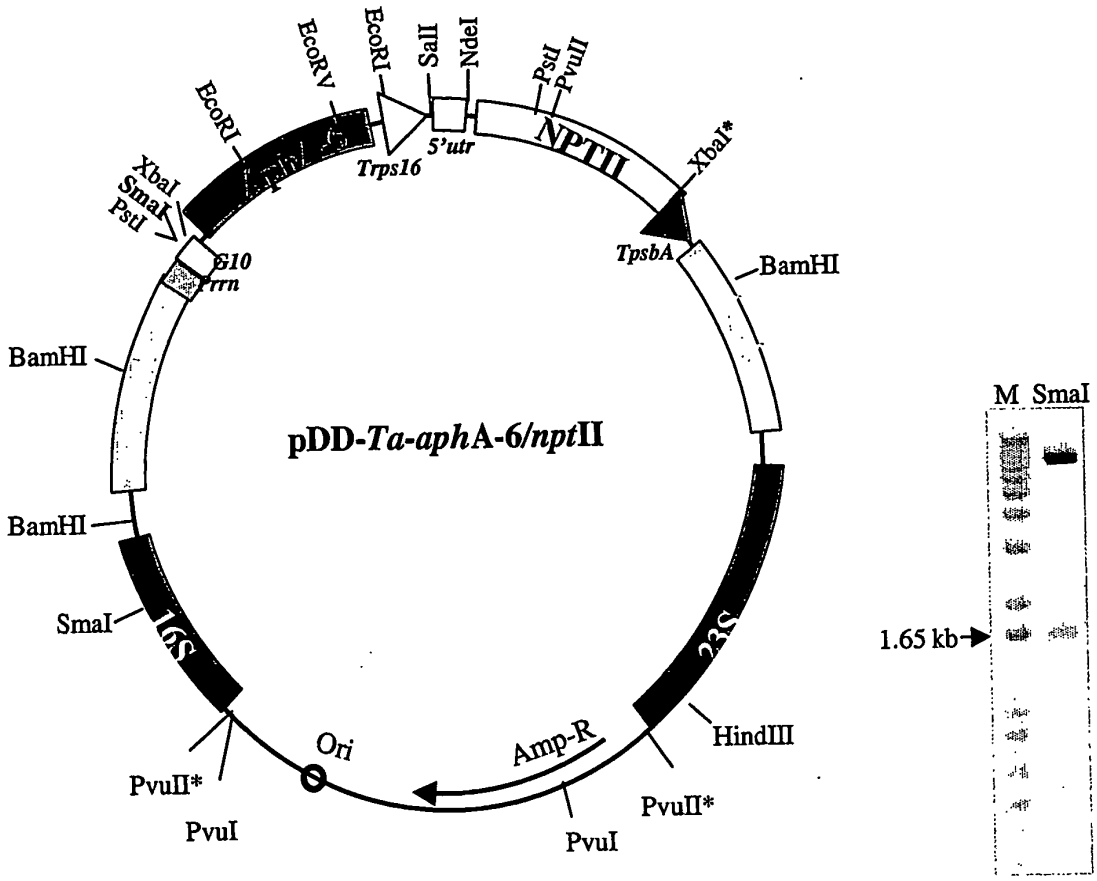


FIG8

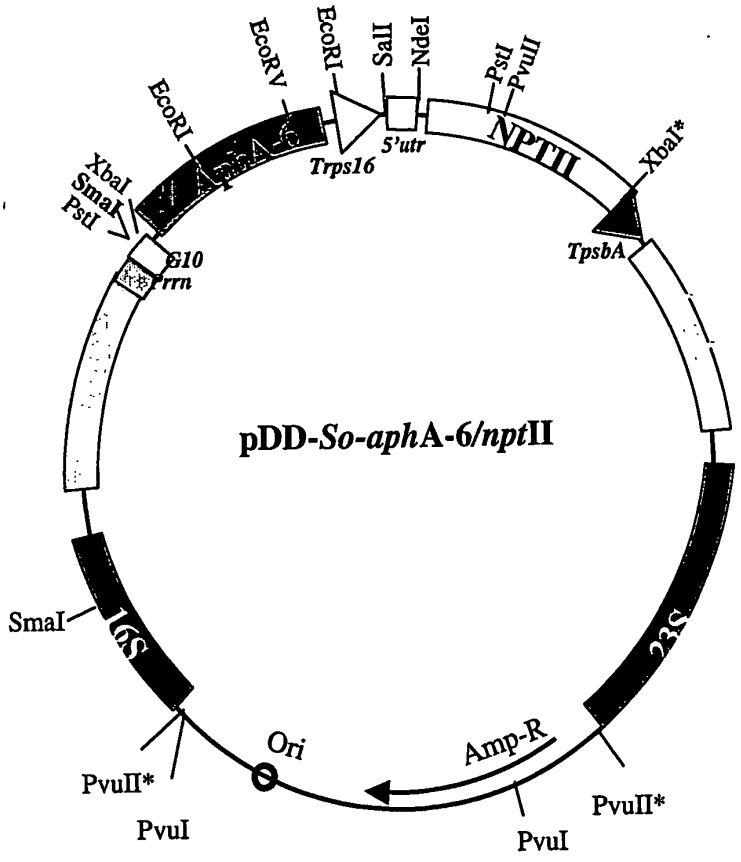
PLASMID NAME: pDD-*Ta-aph*A-6/*npt*II

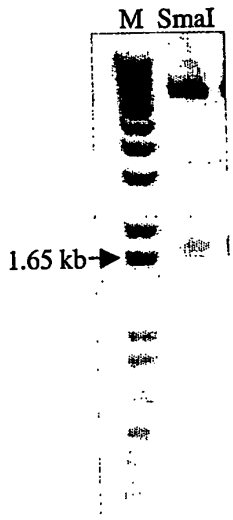


* Means destroyed

FIG 9

PLASMID NAME: pDD-*So-aph*A-6/*npt*II

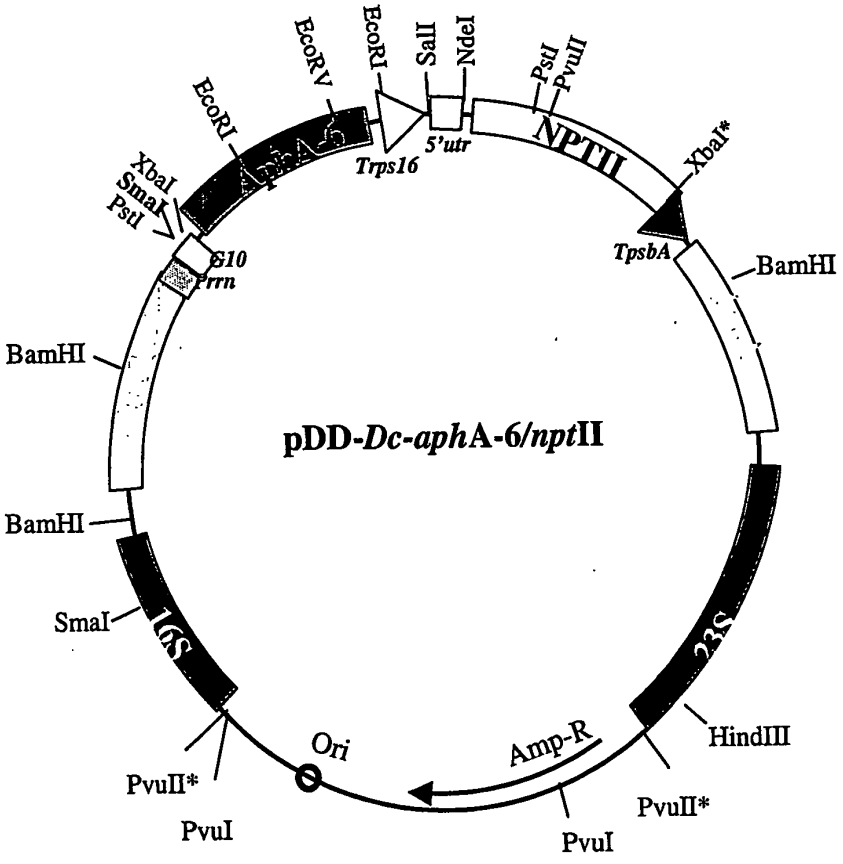




* Means destroyed

FIG 10

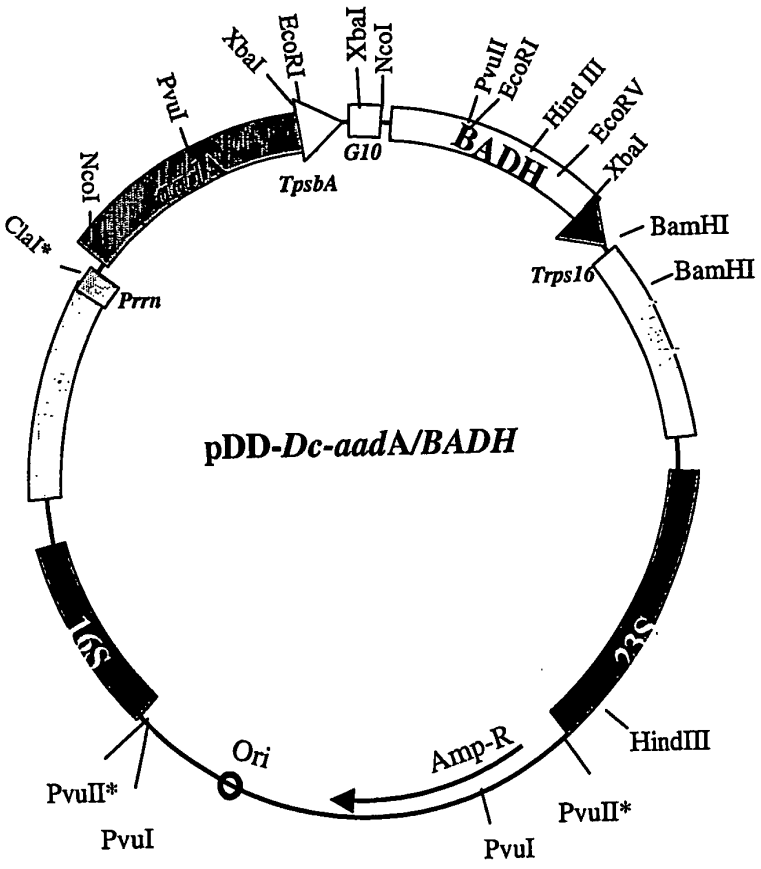
PLASMID NAME: pDD-*Dc-aph*A-6/*npt*II



* Means destroyed

FIG 11

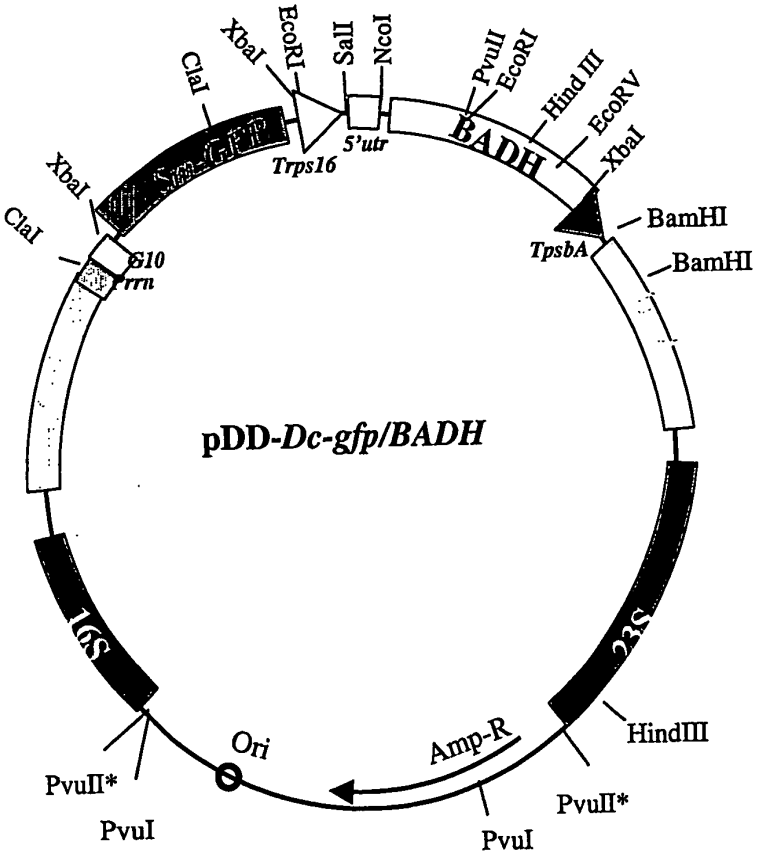
PLASMID NAME: pDD-*Dc-aad*A/*BADH*



* Means destroyed

FIG 12

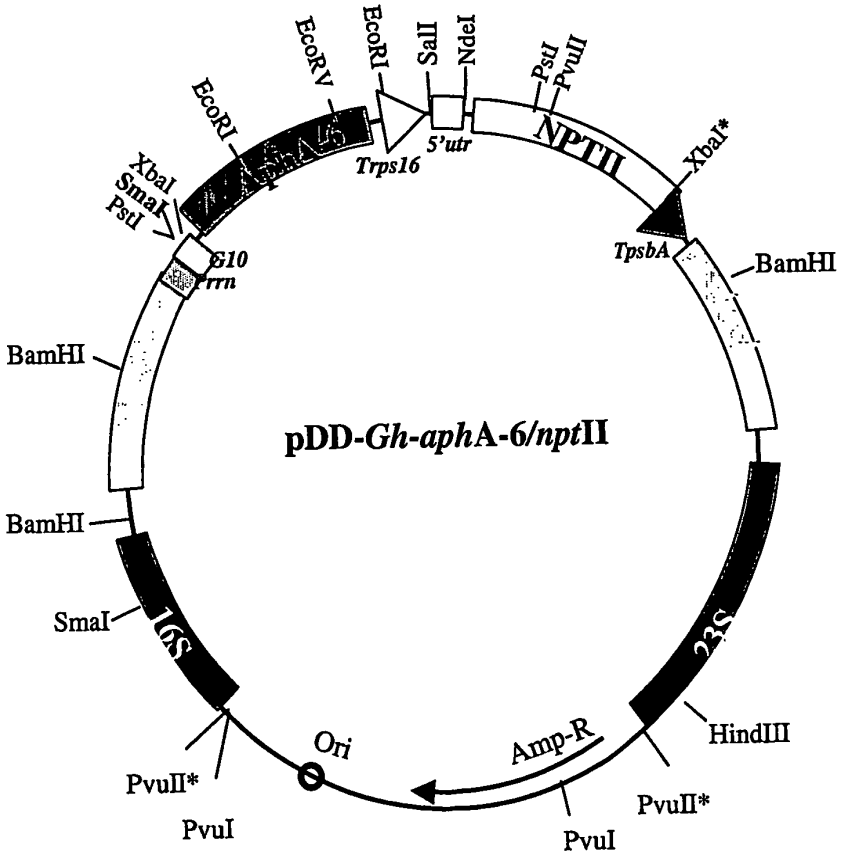
PLASMID NAME: pDD-*Dc-gfp/BADH*



* Means destroyed

FIG 13

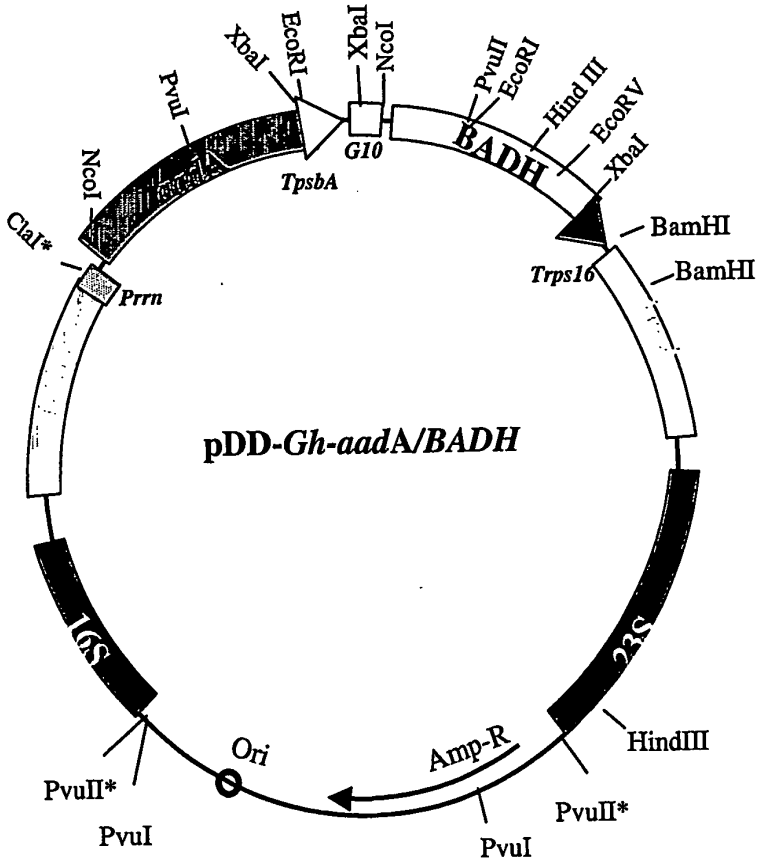
PLASMID NAME: pDD-*Gh-aph*A-6/*npt*II



* Means destroyed

FIG 14

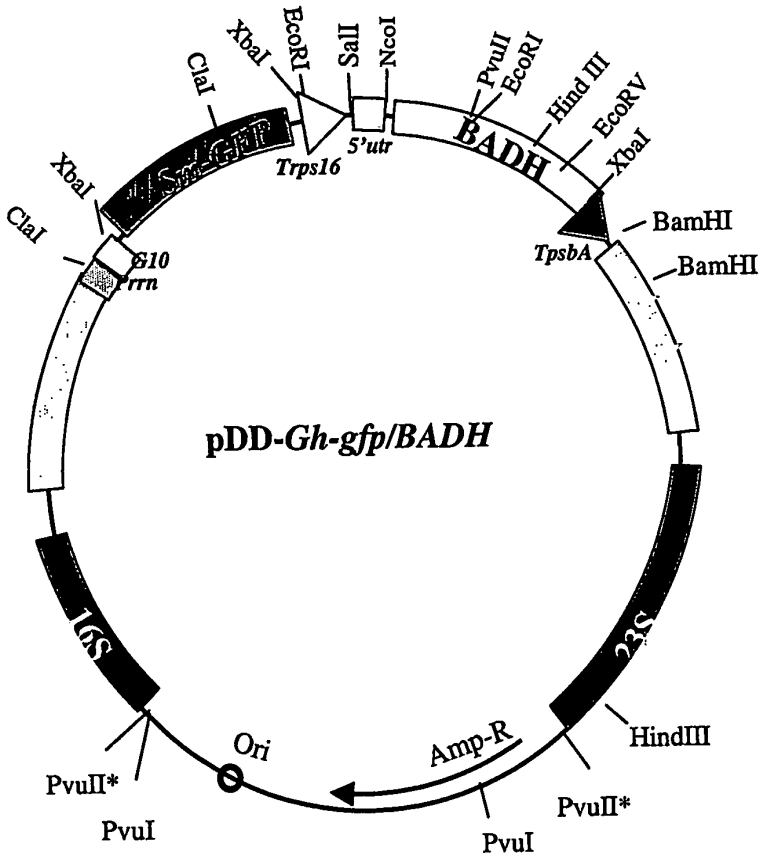
PLASMID NAME: pDD-*Gh-aadA/BADH*



* Means destroyed

FIG 15

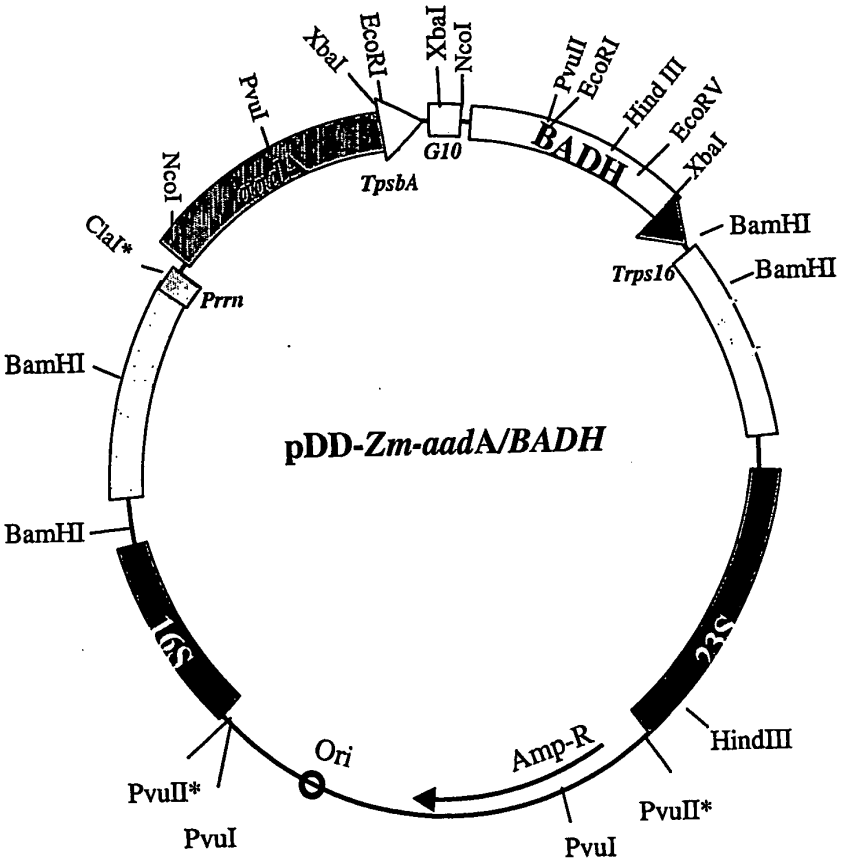
PLASMID NAME: pDD-*Gh-gfp/BADH*



* Means destroyed

FIG 16

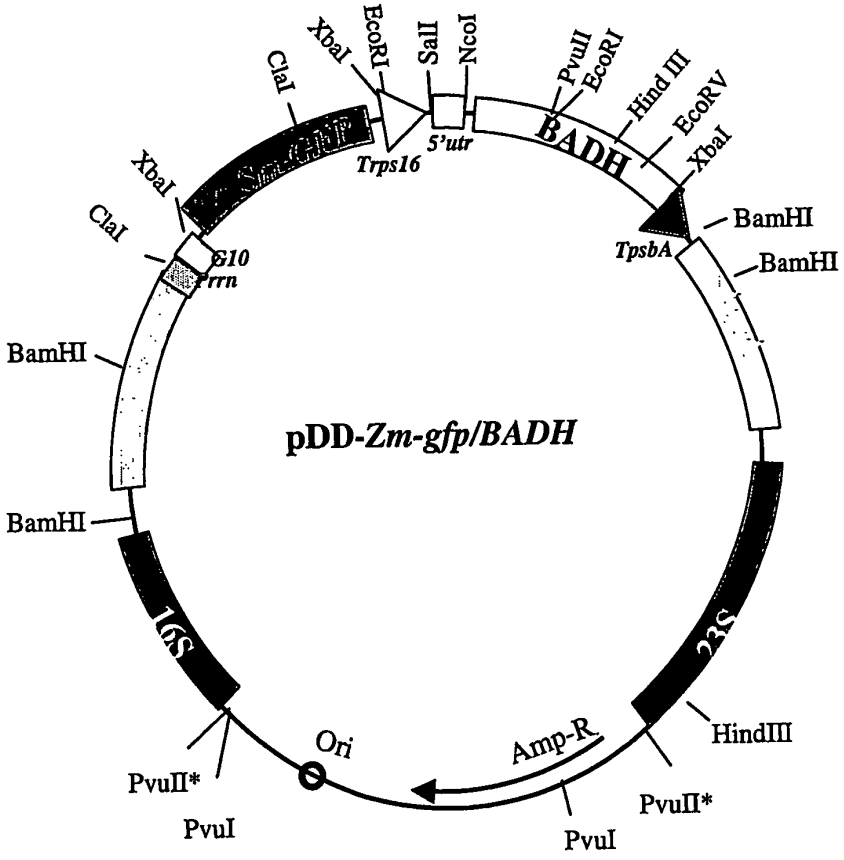
PLASMID NAME: pDD-*Zm-aad*A/*BADH*



* Means destroyed

FIG 17

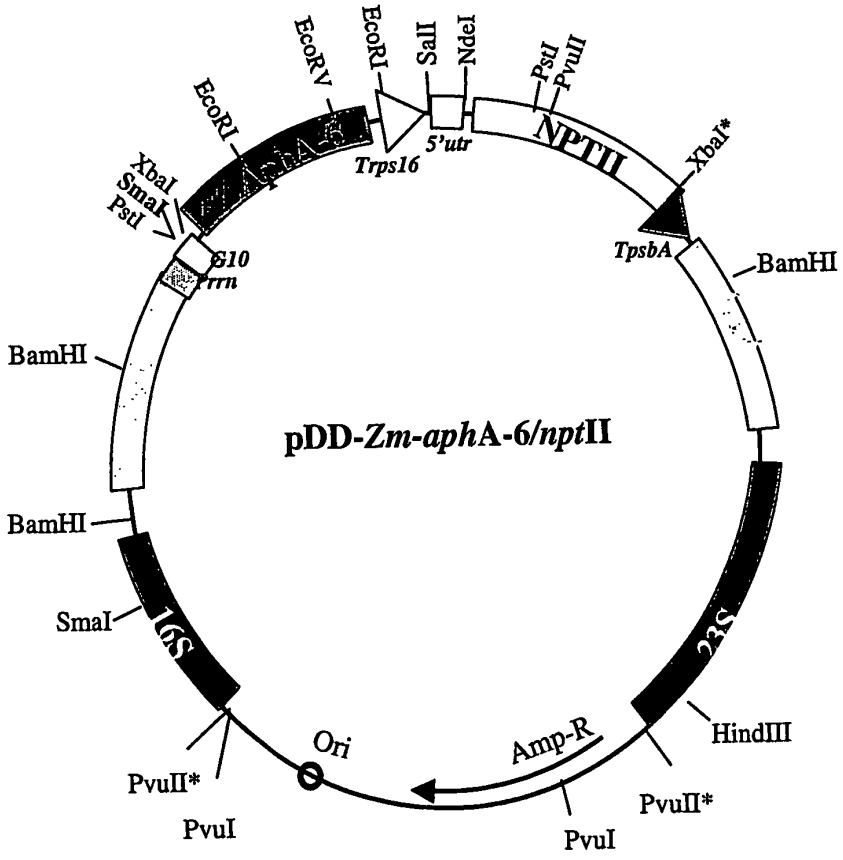
PLASMID NAME: pDD-*Zm-gfp/BADH*



* Means destroyed

FIG 18

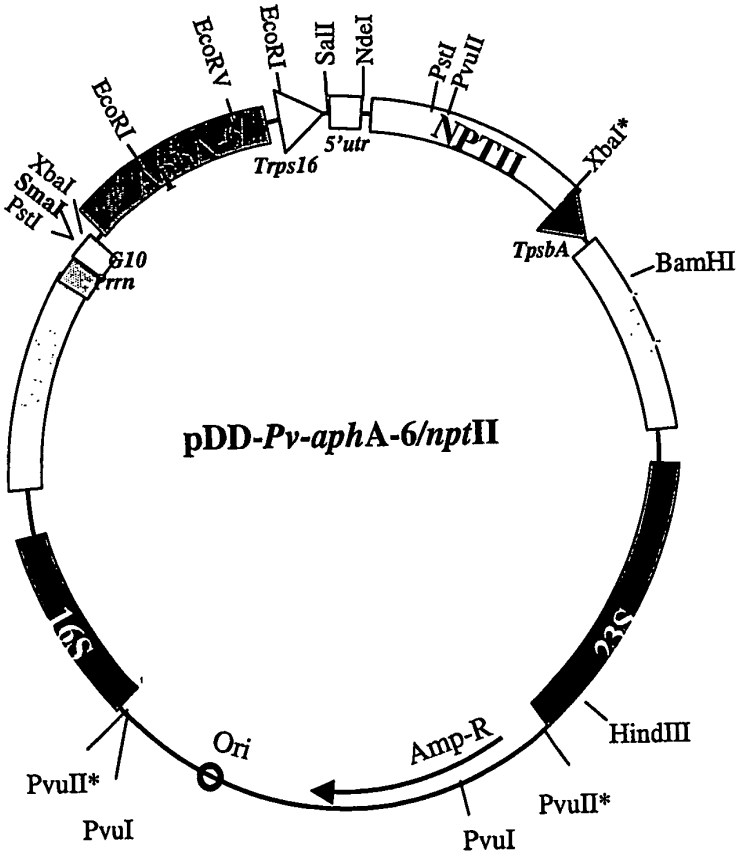
PLASMID NAME: pDD-Zm-*aph*A-6/*npt*II



* Means destroyed

FIG 19

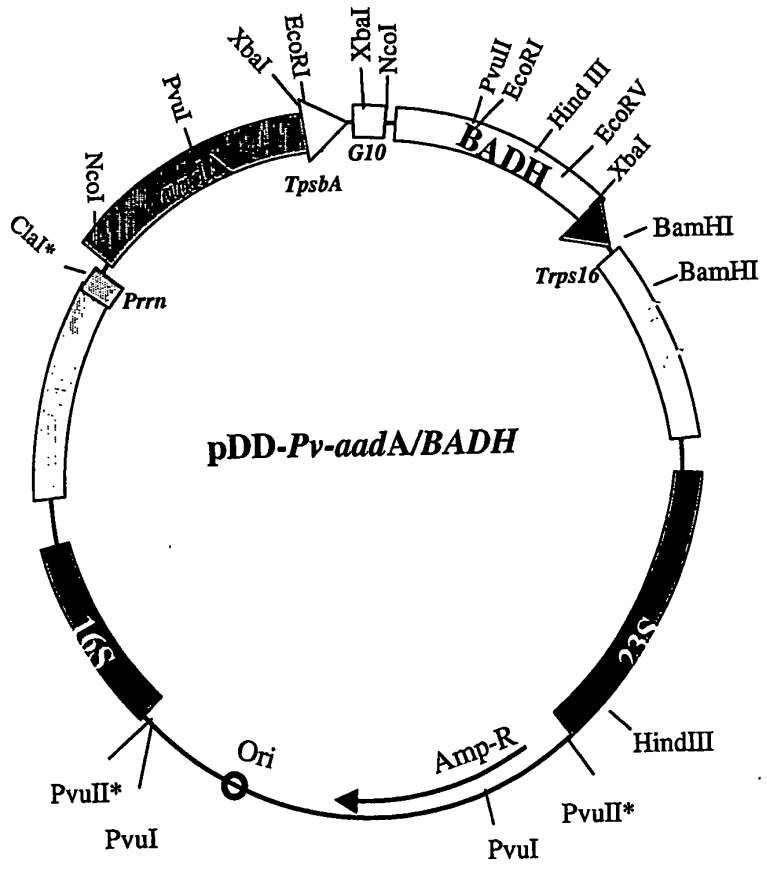
PLASMID NAME: pDD-*Pv-aph*A-6/*npt*II *(switchgrass)*



* Means destroyed

FIG 20

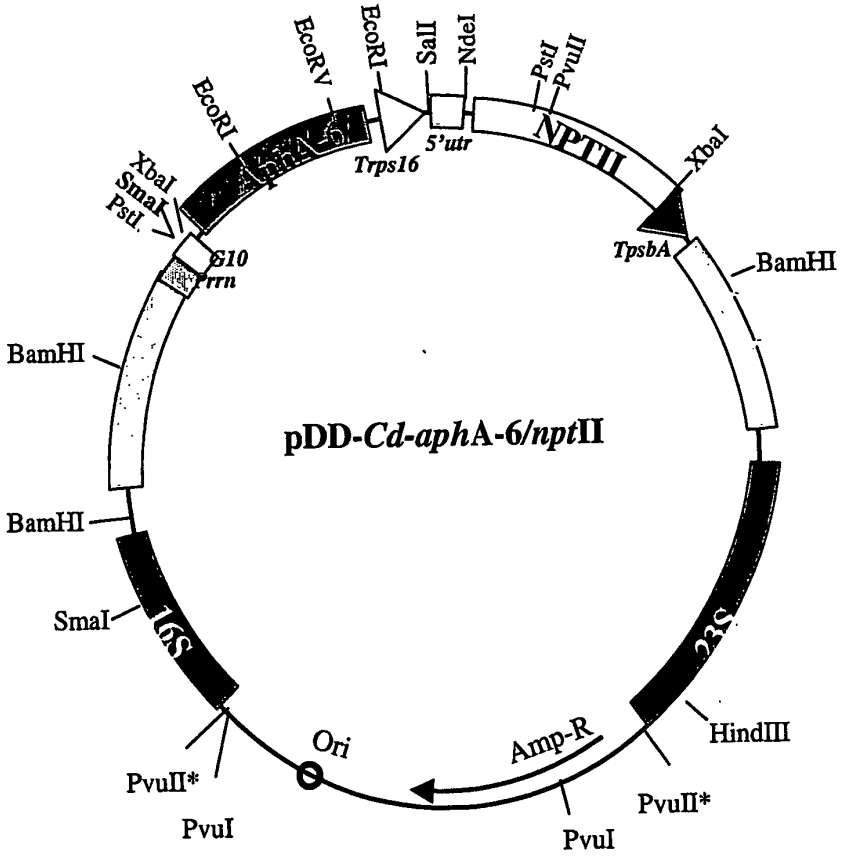
PLASMID NAME: pDD-*Pv-aadA/BADH (switchgrass)*



* Means destroyed

FIG 21

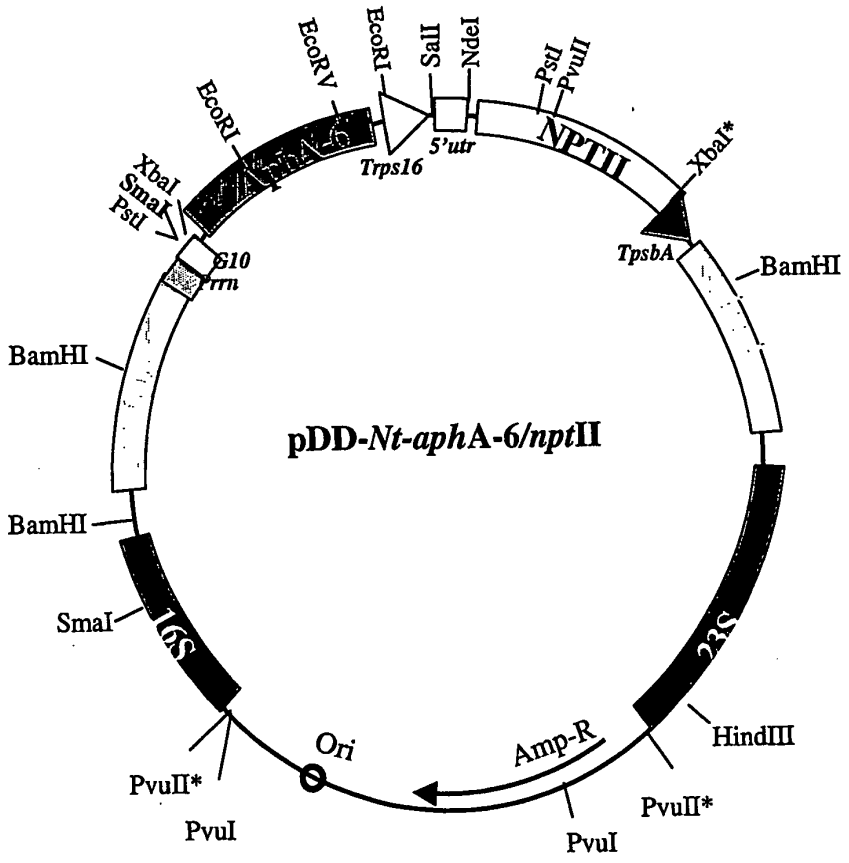
PLASMID NAME: pDD-*Cd-aph*A-6/*npt*II *(bermudagrass)*



* Means destroyed

FIG 22

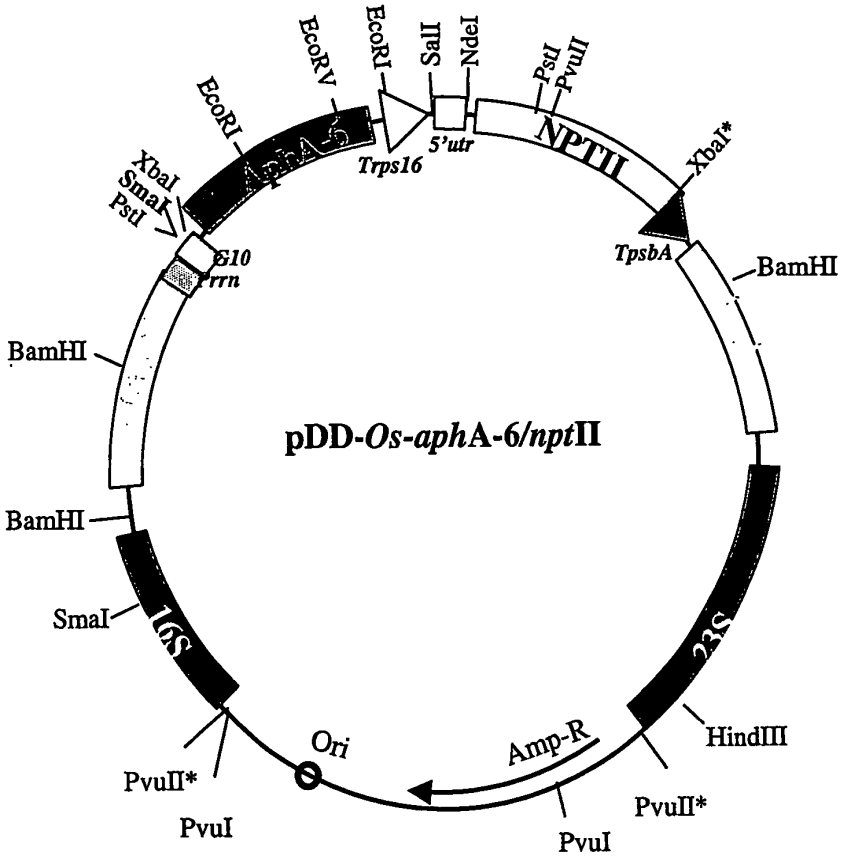
PLASMID NAME: pDD-*Nt-aph*A-6/*npt*II



* Means destroyed

FIG 23

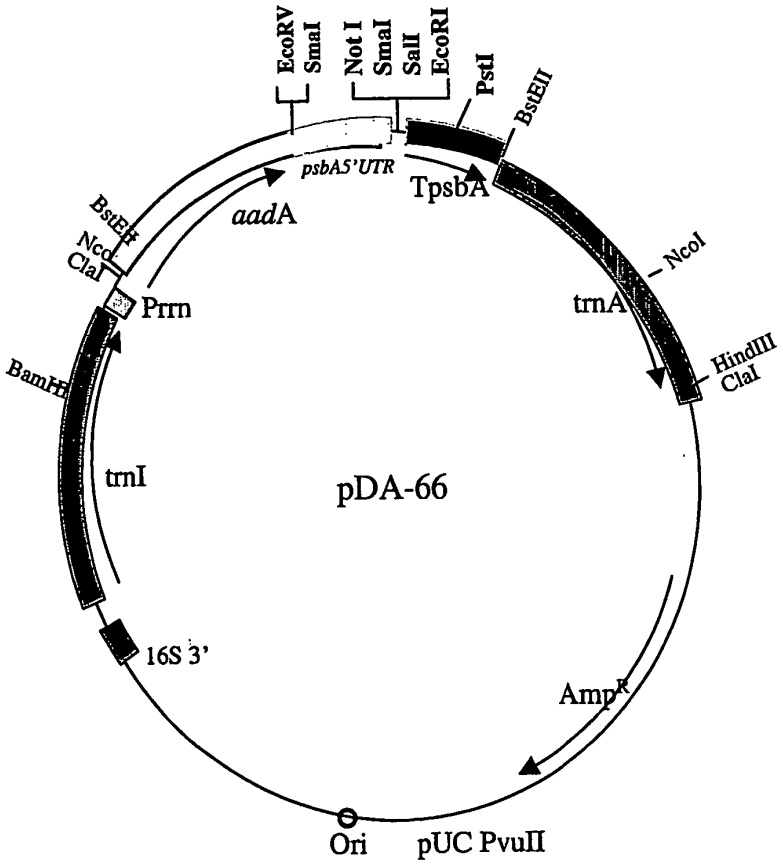
PLASMID NAME: pDD-*Os-aph*A-6/*npt*II



* Means destroyed

FIG 24

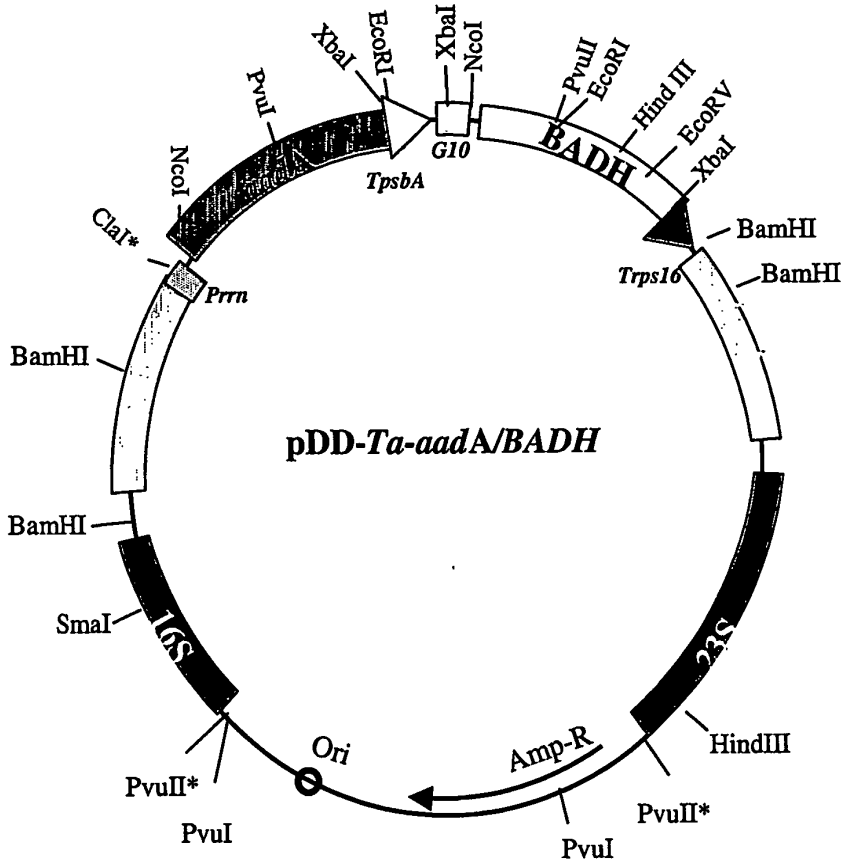
PLASMID NAME: pDA-66



LIST OF UNIQUE SITES:
NotI, SalI, EcoRI, HindIII

FIG 25

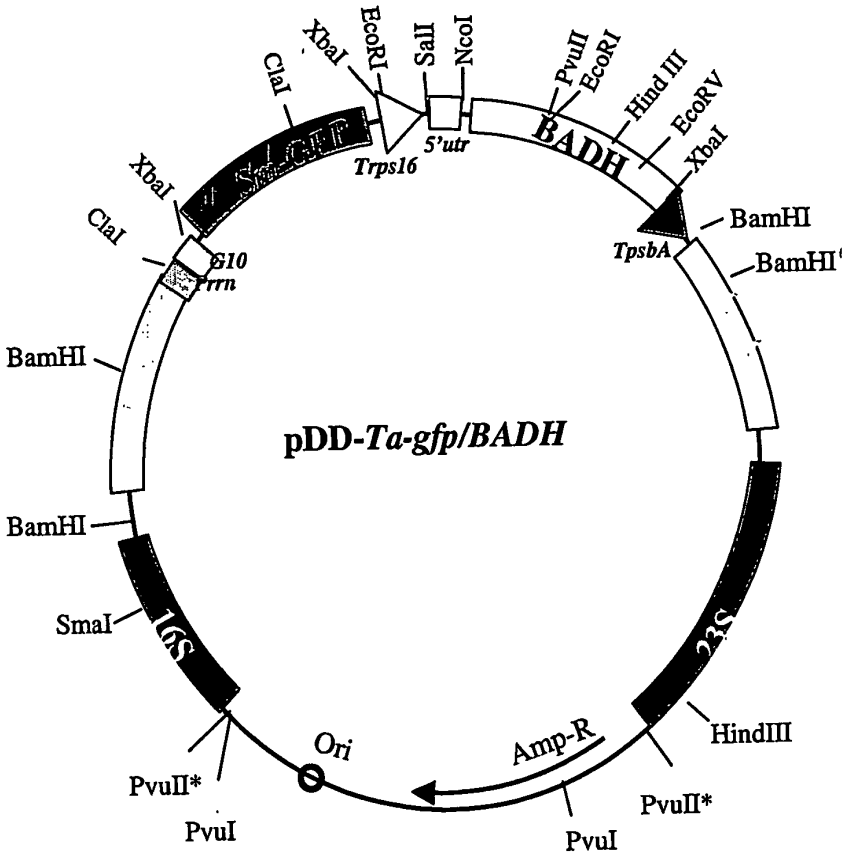
PLASMID NAME: pDD-*Ta-aadA/BADH*



* Means destroyed

FIG 26

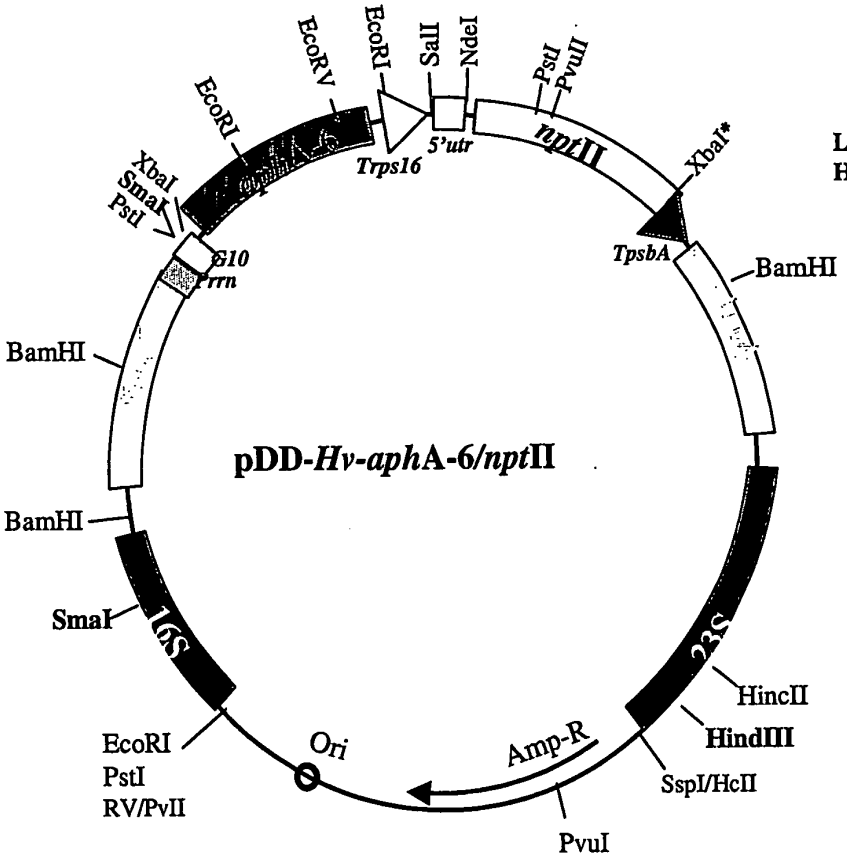
PLASMID NAME: pDD-*Ta-gfp/BADH*



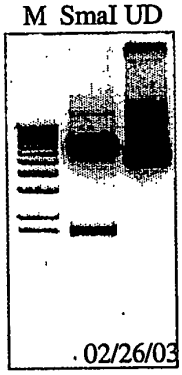
* Means destroyed

FIG 27

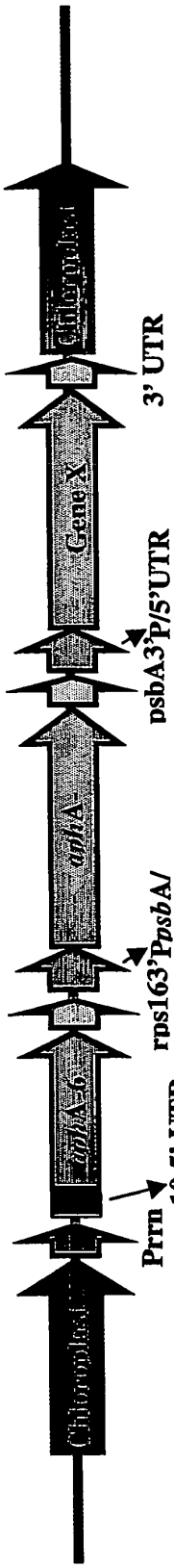
PLASMID NAME: pDD-*Hv-aph*A-6/*npt*II



LIST OF UNIQUE SITES:
HindIII

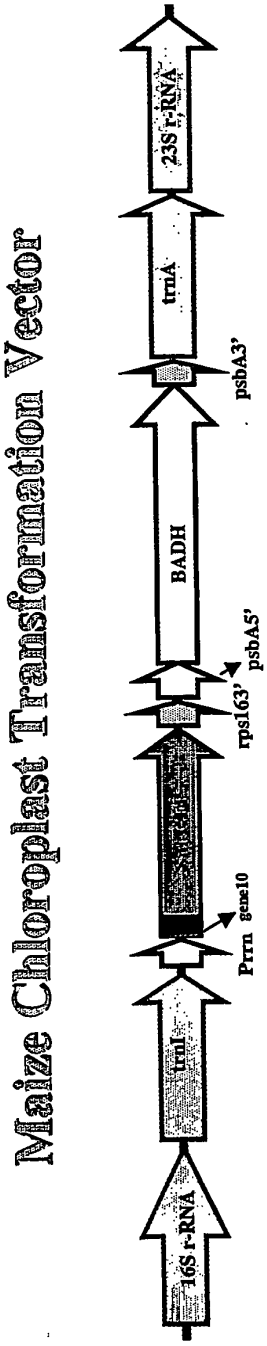


Midi prep 1µl

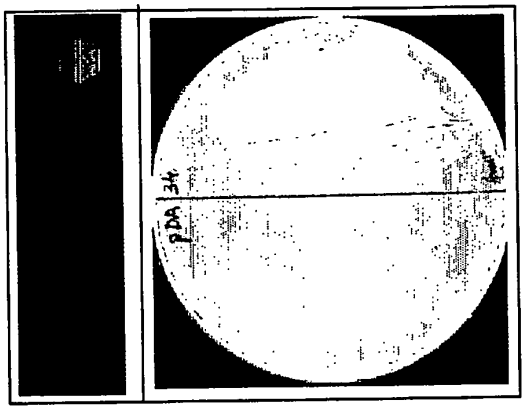


Double Barrel Plastid Vector harboring *aph*A-6 and *aph*A-2 genes conferring resistance to aminoglycosides

FIG 28

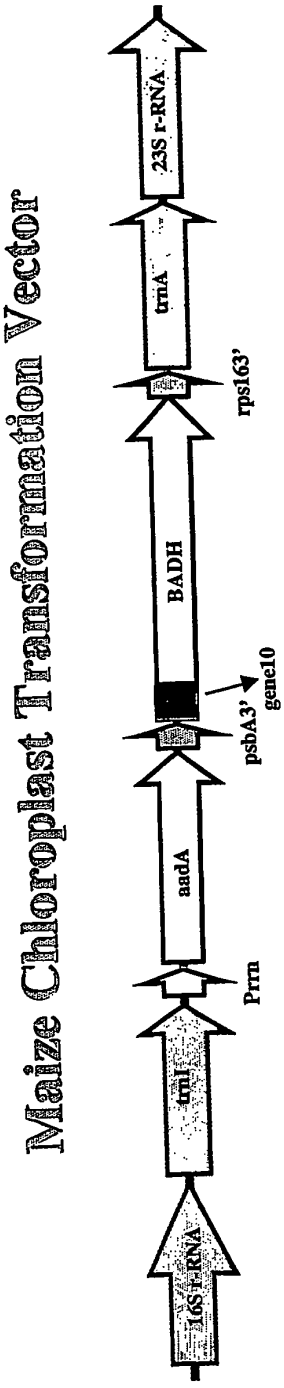


pDD34-ZM-gfp-BADH

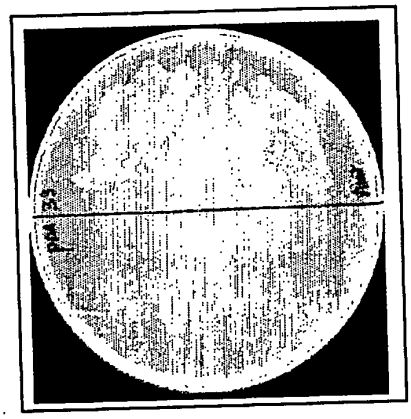


GFP expression in E. coli

FIG 29



pDD33-ZM-aadA-BADH



E. coli cells grown on Spectinomycin

FIG 30

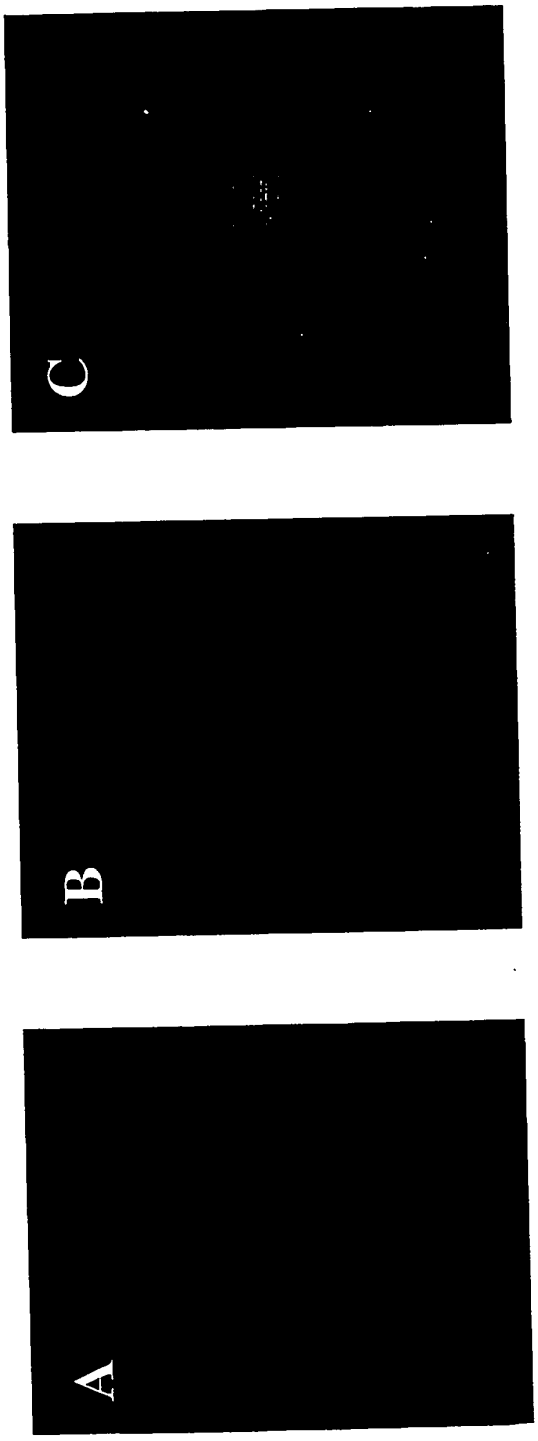


FIG 31

FIG 32A

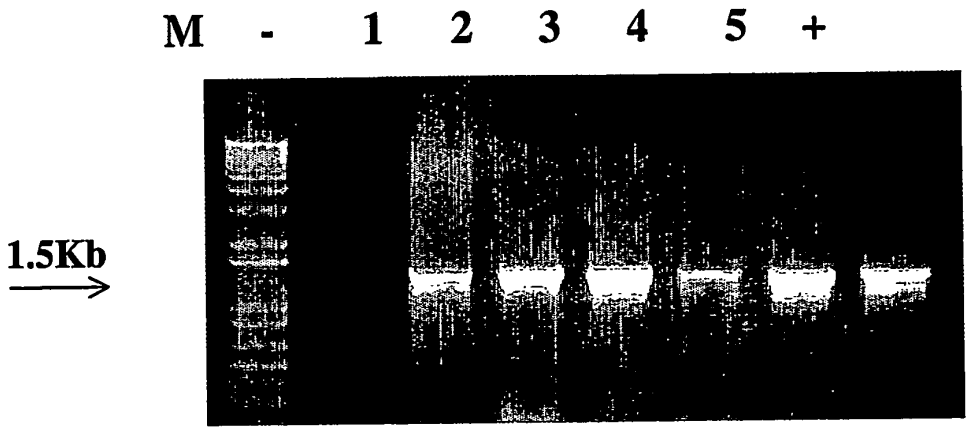


FIG 32B

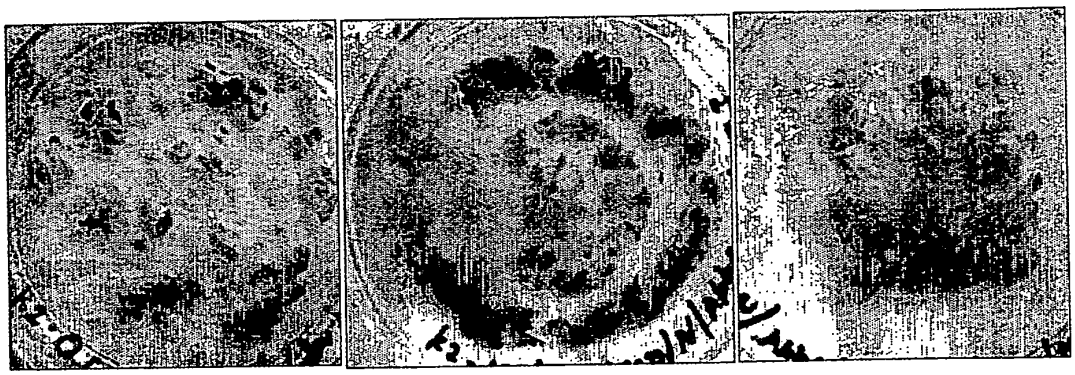


FIG 33(A-B)

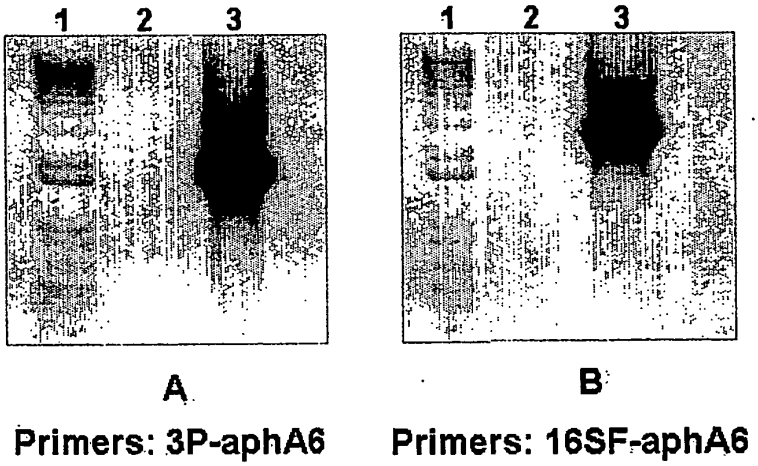


FIG 34 (A-B)

FIG 35

1. Sequence of aadA/BADH cassette (SEQ ID No. 1):

AGCTTGCGGGCCCCCCCTCGAGGTCGACGGTATCGATGAGCCTGATTATCCCTAAGCCCAATGTGAGTTTTTCTAGTTGG
ATTTGCTCCCCCGCCGTCGTTCAATGAGAATGGATAAGAGGCTCGTGGGATTGACGTGAGGGGGCAGGGATGGCTATATT
TCTGGGAGCGAACTCCGGGCGAATATGAAGCGCATGGATACAAGTTATGCCTTGGAATGAAAGACAATTCCGAATCCGCT
TTGTCTACCCGATACAAGTGAGTTGTAGGGAGGCAACCATGGCAGAAGCGGTGATCGCCGAAGTATCGACTCAACTATCA
GAGGTAGTTGGCGTCATCGAGCGCCATCTCGAACCGACGTTGCTGGCCGTACATTTGTACGGCTCCGCAGTGGATGGCGG
CCTGAAGCCACACAGTGATATTGATTTGCTGGTTACGGTGACGGTGACCGTAAGGCTTGATGAAACAACGCGGCGAGCTT
TGATCAACGACCTTTTGGAAACTTCGGCTTCCCCTGGAGAGAGCGAGATTCTCCGCGCTGTAGAAGTCACCATTGTTGTG
CACGACGACATCATTCCGTGGCGTTATCCAGCTAAGCGCGAACTGCAATTTGGAGAATGGCAGCGCAATGACATTCTTGC
AGGTATCTTCGAGCCAGCCACGATCGACATTGATCTGGCTATCTTGCTGGCAAAAGCAAGAGAACATAGCGTTGCCTTGG
TAGGTCCAGCGGCGGAGGAACTCTTTGATCCGGTTCCTGAACAGGATCTATTTGAGGCGCTAAATGAAACCTTAACGCTA
TGGAACTCGCCGCCCGACTGGGCTGGCGATGAGCGAAATGTAGTGCTTACGTTGTCCCGCATTTGGTACAGCGCAGTAAC
CGGCAGAATCGCGCCGAAGGATGTCGCTGCCGACTGGGCAATGGAGCGCCTGCCGGCCCAGTATCAGCCCGTCATACTTG
AAGCTAGACAGGCTTATCTTGGACAAGAAGAAGATCGCTTGGCCTCGCGCGCAGATCAGTTGGAAGAATTTGTTCACTAC
GTGAAAGGCGAGATCACCAAGGTAGTCGGCAAATAAAAAGCCGAATCTAGAGCGATCCTGGCCTAGTCTATAGGAGGTTT
TGAAAAGAAAGGAGCAATAATCATTTTCTTGTTCTATCAAGAGGGTGCTATTGCTCCTTTCTTTTTTTCTTTTTATTTAT
TTACTAGTATTTTACTTACATAGACTTTTTTGTTTACATTATAGAAAAAGAAGGAGAGGTTATTTTCTTGCATTTATTCA
TGATTGAGTATTCTATTTTGATTTTGTATTTGTTTGGGCTGCGCGGGGAGACCACAACGGTTTCCCTCTAGAAATAATTT
TGTTTAACTTTAAGAAGGAGATATACCATGGCGTTCCCAATTCCTGCTCGTCAGCTATTCATCGACGGAGAGTGGAGAGA
ACCCATTAAAAAAAATCGCATACCCGTCATCAATCCGTCCACTGAAGAAATCATCGGTGATATTCCGGCAGCCACGGCTG
AAGATGTGGAGGTTGCGGTGGTGGCAGCTCGAAGAGCCTTTAGGAGGAACAATTGGTCAGCAACATCTGGGGCTCATCGT
GCCACATACTTGCGTGCTATTGCTGCTAAGATAACAGAAAAAAAAGATCATTTCGTTAAACTGGAAACCATTGATTCTGG
GAAACCTTTTGATGAAGCAGTGCTGGACATTGATGACGTTGCTTCATGTTTTGAATATTTTGCCGGACAAGCAGAAGCTC
TTGATGGTAAACAAAAGGCTCCAGTCACCCTGCCTATGGAAAGGTTCAAAAGTCATGTTCTCAGGCAGCCCCTTGGTGTT
GTTGGATTAATATCCCCATGGAATTACCCACTTCTAATGGCTACATGGAAAATTGCTCCAGCACTTGCTGCTGGGTGTAC
AGCTGTACTTAAGCCATCCGAGTTGGCATCTGTGACTTGTCTAGAATTCGGTGAAGTTTGCAACGAAGTGGGACTTCCTC
CAGGCGTGTTGAATATCTTGACAGGATTAGGTCCAGATGCTGGTGCACCATTAGTATCACACCCCGATGTTGACAAGATT
GCCTTTACTGGGAGTAGTGCCACTGGAAGCAAGGTTATGGCTTCTGCTGCCCAATTGGTTAAGCCTGTTACATTAGAACT
TGGGGGTAAAAGTCCTATTGTAGTGTTTGAAGATGTTGATATTGATAAAGTTGTGGAATGGACTATTTTTGGCTGTTTCT
GGACAAATGGTCAAATATGTAGTGCAACGTCTAGACTGCTTGTGCATGAAAGTATTGCAGCTGAGTTTGTTGATAAGCTT
GTAAAATGGACGAAAAACATTAAAATTTCTGACCCATTTGAAGAAGGATGCCGGCTTGGCCCTGTTATTAGTAAAGGACA
GTACGACAAAATTATGAAGTTCATATCAACAGCAAAGAGTGAGGGGGCAACTATTTTGTATGGAGGTTCCCGTCCTGAGC
ATTTGAAGAAAGGTTATTACATTGAACCCACCATTGTAACTGATATCTCCACATCCATGCAAATATGGAAAGAGGAAGTT
TTTGGCCCTGTCTTGTGTGTTAAAACATTTAGTTCCGAAGATGAAGCCATTGCATTGGCAAATGATACAGAGTACGGTTT
AGCTGCTGCTGTGTTTTCTAATGATCTTGAAAGATGTGAGAGGATAACGAAGGCTCTAGAAGTTGGAGCTGTTTGGGTTA
ATTGCTCACAACCATGCTTTGTTCAAGCTCCTTGGGGAGGCATCAAGCGTAGTGGTTTTGGACGTGAACTTGGAGAATGG
GGTATCCAGAATTACTTGAATATCAAGCAGGTGACTCAAGATATTTCTGATGAACCATGGGGATGGTACAAGTCTCCTTG
AAAGCCGAATTCCAGCACACTGGCGGCCGTTACTAGATCCATCACACTGGCGGCCCGAACACGGAATTCAATGGAAGCAA
TGATAAAAAAAATACAAATAGAAAAGGAAAGGGAGGAAATACAAAAAAATAGAAGAGAAAAGTCATACAAAGTTATATAC
A
AATGACTACCCCCCTTTTTGTATTTCCTTAATTTATTTCCTTAATTGAATTTCGATGGATACAAGTTATGCCTTGGAATG
AATTTCGGTTGATTAGGACTAGTAAGCCGAATTCTGCAGATATCCATCACACTGGCGGCCGCTCGAGCATGCATCTAGAG
GGCC

FIG 36

2. Sequence of gfp/BADH expression cassette (SEQ ID No. 2):

CGGGCCCCCCCTCGAGGTCGACGGTATCGATGAGCCTGATTATCCCTAAGCCCAATGTGAGTTTTTCTAGTTGGATTTGC
TCCCCCGCCGTCGTTCAATGAGAATGGATAAGAGGCTCGTGGGATTGACGTGAGGGGGCAGGGATGGCTATATTTCTGGG
AGCGAACTCCGGGCGAATATGAAGCGCATGGATACAAGTTATGCCTTGGAATGAAAGACAATTCCGAATCCGCTTTGTCT
ACCGGGAGACCACAACGGTTTCCCTCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGATATACCCATGTCCATGAGTAA
AGGAGAAGAACTTTTCACTGGAGTTGTCCCAATTCTTGTTGAATTAGATGGTGATGTTAATGGGCACAAATTTTCTGTCA
GTGGAGAGGGTGAAGGTGATGCAACATACGGAAAACTTACCCTTAAATTTATTTGCACTACTGGAAAACTACCTGTTCCA
TGGCCAACACTTGTCACTACTTTCTCTTATGGTGTTCAATGCTTTCAAGATACCCAGATCATATGAAGCGGCACGACTT
CTTCAAGAGCGCCATGCCTGAGGGATACGTGCAGGAGAGGACCATCTCTTTCAAGGACGACGGGAACTACAAGACACGTG
CTGAAGTCAAGTTTGAGGGAGACACCCTCGTCAACAGGATCGAGCTTAAGGGAATCGATTTCAAGGAGGACGGAAACATC
CTCGGCCACAAGTTGGAATACAACTACAACTCCCACAACGTATACATCACGGCAGACAAACAAAAGAATGGAATCAAAGC
TAACTTCAAAATTAGACACAACATTGAAGATGGAAGCGTTCAACTAGCAGACCATTATCAACAAAATACTCCAATTGGCG
ATGGCCCTGTCCTTTTACCAGACAACCATTACCTGTCCACACAATCTGCCCTTTCGAAAGATCCCAACGAAAAGAGAGAC
CACATGGTCCTTCTTGAGTTTGTAACAGCTGCTGGGATTACACATGGCATGGATGAACTATACAAATAATCTAGAAAGCC
GAATTCTGCAGATCGAACACGGAATTCAATGGAAGCAATGATAAAAAAATACAAATAGAAAAGGAAAGGGAGGAAATACA
AAAAAATAGAAGAGAAAAGTCATACAAAGTTATATACAAATGACTACCCCCCTTTTTGTATTTCCTTAATTTATTTCCTT
AATTGAATTTCGATGGATACAAGTTATGCCTTGGAATGAATTTCGGTTGATTAGGACTAGCGATAAGCTTGATATCGAAT
TCGGCTTGATATCGTCGACGTAGAGAAGTCCGTATTTTTCCAATCAACTTCATTAAAAATTTGAATAGATCTACATACAC
CTTGGTTGACACGAGTATATAAGTCATGTTATACTGTTGAATAAAAAGCCTTCCATTTTCTATTTTGATTTGTAGAAAAC
TAGTGTGCTTGGGAGTCCCTGATGATTAAATAAACCAAGATTTTCCATGGCGTTCCCAATTCCTGCTCGTCAGCTATTCA
TCGACGGAGAGTGGAGAGAACCCATTAAAAAAAATCGCATACCCGTCATCAATCCGTCCACTGAAGAAATCATCGGTGAT
ATTCCGGCAGCCACGGCTGAAGATGTGGAGGTTGCGGTGGTGGCAGCTCGAAGAGCCTTTAGGAGGAACAATTGGTCAGC
AACATCTGGGGCTCATCGTGCCACATACTTGCGTGCTATTGCTGCTAAGATAACAGAAAAAAAAGATCATTTCGTTAAAC
TGGAAACCATTGATTCTGGGAAACCTTTTGATGAAGCAGTGCTGGACATTGATGACGTTGCTTCATGTTTTGAATATTTT
GCCGGACAAGCAGAAGCTCTTGATGGTAAACAAAAGGCTCCAGTCACCCTGCCTATGGAAAGGTTCAAAAGTCATGTTCT
CAGGCAGCCCCTTGGTGTTGTTGGATTAATATCCCCATGGAATTACCCACTTCTAATGGCTACATGGAAAATTGCTCCAG
CACTTGCTGCTGGGTGTACAGCTGTACTTAAGCCATCCGAGTTGGCATCTGTGACTTGTCTAGAATTCGGTGAAGTTTGC'
AACGAAGTGGGACTTCCTCCAGGCGTGTTGAATATCTTGACAGGATTAGGTCCAGATGCTGGTGCACCATTAGTATCACA
CCCCGATGTTGACAAGATTGCCTTTACTGGGAGTAGTGCCACTGGAAGCAAGGTTATGGCTTCTGCTGCCCAATTGGTTA
AGCCTGTTACATTAGAACTTGGGGGTAAAAGTCCTATTGTAGTGTTTGAAGATGTTGATATTGATAAAGTTGTGGAATGG
ACTATTTTTGGCTGTTTCTGGACAAATGGTCAAATATGTAGTGCAACGTCTAGACTGCTTGTGCATGAAAGTATTGCAGC
TGAGTTTGTTGATAAGCTTGTAAAATGGACGAAAAACATTAAAATTTCTGACCCATTTGAAGAAGGATGCCGGCTTGGCC
CTGTTATTAGTAAAGGACAGTACGACAAAATTATGAAGTTCATATCAACAGCAAAGAGTGAGGGGGCAACTATTTTGTAT
GGAGGTTCCCGTCCTGAGCATTTGAAGAAAGGTTATTACATTGAACCCACCATTGTAACTGATATCTCCACATCCATGCA
AATATGGAAAGAGGAAGTTTTTGGCCCTGTCTTGTGTGTTAAAACATTTAGTTCCGAAGATGAAGCCATTGCATTGGCAA
ATGATACAGAGTACGGTTTAGCTGCTGCTGTGTTTTCTAATGATCTTGAAAGATGTGAGAGGATAACGAAGGCTCTAGAA
GTTGGAGCTGTTTGGGTTAATTGCTCACAACCATGCTTTGTTCAAGCTCCTTGGGGAGGCATCAAGCGTAGTGGTTTTGG
ACGTGAACTTGGAGAATGGGGTATCCAGAATTACTTGAATATCAAGCAGGTGACTCAAGATATTTCTGATGAACCATGGG
GATGGTACAAGTCTCCTTGAAAGCCGAATTCCAGCACACTGGCGGCCGTTACTAGTGGATCCACTAGTAACGGCCGCCAG
TGTGCTGGAATTCGGCTTTCTAGAGCGATCCTGGCCTAGTCTATAGGAGGTTTTGAAAAGAAAGGAGCAATAATCATTTT
CTTGTTCTATCAAGAGGGTGCTATTGCTCCTTTCTTTTTTTCTTTTTATTTATTTACTAGTATTTTACTTACATAGACTT
TTTTGTTTACATTATAGAAAAAGAAGGAGAGGTTATTTTCTTGCATTTATTCATGATTGAGTATTCTATTTTGATTTTGT
ATTTGTTTGGGCTGCGAGCT

FIG 37

3. Sequence of the aphA-6/nptII expression cassette (SEQ ID No. 3):

CGGGCCCCCCCTCGAGGTCGACGGTATCGATGAGCCTGATTATCCCTAAGCCCAATGTGAGTTTTTCTAGTTGGATTTGC
TCCCCCGCCGTCGTTCAATGAGAATGGATAAGAGGCTCGTGGGATTGACGTGAGGGGGCAGGGATGGCTATATTTCTGGG
AGCGAACTCCGGGCGAATATGAAGCGCATGGATACAAGTTATGCCTTGGAATGAAAGACAATTCCGAATCCGCTTTGTCT
ACCTGCAGCCCGGGAGACCACAACGGTTTCCCTCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGATATACCATGGAAT
TACCAAATATTATTCAACAATTTATCGGAAACAGCGTTTTAGAGCCAAATAAAATTGGTCAGTCGCCATCGGATGTTTAT
TCTTTTAATCGAAATAATGAAACTTTTTTTCTTAAGCGATCTAGCACTTTATATACAGAGACCACATACAGTGTCTCTCG
TGAAGCGAAAATGTTGAGTTGGCTCTCTGAGAAATTAAAGGTGCCTGAACTCATCATGACTTTTCAGGATGAGCAGTTTG
AATTCATGATCACTAAAGCGATCAATGCAAAACCAATTTCAGCGCTTTTTTTAACAGACCAAGAATTGCTTGCTATCTAT
AAGGAGGCACTCAATCTGTTAAATTCAATTGCTATTATTGATTGTCCATTTATTTCAAACATTGATCATCGGTTAAAAGA
GTCAAAATTTTTTATTGATAACCAACTCCTTGACGATATAGATCAAGATGATTTTGACACTGAATTATGGGGAGACCATA
AAACTTACCTAAGTCTATGGAATGAGTTAACCGAGACTCGTGTTGAAGAAAGATTGGTTTTTTCTCATGGCGATATCACG
GATAGTAATATTTTTATAGATAAATTCAATGAAATTTATTTTTTAGATCTTGGTCGTGCTGGGTTAGCAGATGAATTTGT
AGATATATCCTTTGTTGAACGTTGCCTAAGAGAGGATGCATCGGAGGAAACTGCGAAAATATTTTTAAAGCATTTAAAAA
ATGATAGACCTGACAAAAGGAATTATTTTTTAAAACTTGATGAATTGAATTGATTCCAAGCATTATCTAAAATACTCCTA
GAGCGGCCCGAACACGGAATTCAATGGAAGCAATGATAAAAAAATACAAATAGAAAAGGAAAGGGAGGAAATACAAAAA
A
ATAGAAGAGAAAAGTCATACAAAGTTATATACAAATGACTACCCCCCTTTTTGTATTTCCTTAATTTATTTCCTTAATTG
AATTTCGATGGATACAAGTTATGCCTTGGAATGAATTTCGGTTGATTAGGACTAGATCGTCGACGTAGAGAAGTCCGTAT
TTTTCCAATCAACTTCATTAAAAATTTGAATAGATCTACATACACCTTGGTTGACACGAGTATATAAGTCATGTTATACT
GTTGAATAAAAAGCCTTCCATTTTCTATTTTGATTTGTAGAAAACTAGTGTGCTTGGGAGTCCCTGATGATTAAATAAAC
CAAGATTTTCATATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTCGGCTATGA
CTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCAGCGCAGGGGCGCCCGGTTCTTTTTGTCA
AGACCGACCTGTCCGGTGCCCTGAATGAACTGCAGGACGAGGCAGCGCGGCTATCGTGGCTGGCCACGACGGGCGTTCCT
TGCGCAGCTGTGCTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAGGATCTCCT
GTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTA
CCTGCCCATTCGACCACCAAGCGAAACATCGCATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGAT
GATCTGGACGAAGAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGACGGCGATGA
TCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAATGGCCGCTTTTCTGGATTCATCGACTGTG
GCCGGCTGGGTGTGGCGGACCGCTATCAGGACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGG
GCTGACCGCTTCCTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTTGACGAGTT
CTTCTGATCTAGAGCGATCCTGGCCTAGTCTATAGGAGGTTTTGAAAAGAAAGGAGCAATAATCATTTTCTTGTTCTATC
AAGAGGGTGCTATTGCTCCTTTCTTTTTTTCTTTTTATTTATTTACTAGTATTTTACTTACATAGACTTTTTTGTTTACA
TTATAGAAAAAGAAGGAGAGGTTATTTTCTTGCATTTATTCATGATTGAGTATTCTATTTTGATTTTGTATTTGTTTGGG
CTGCGAGCT

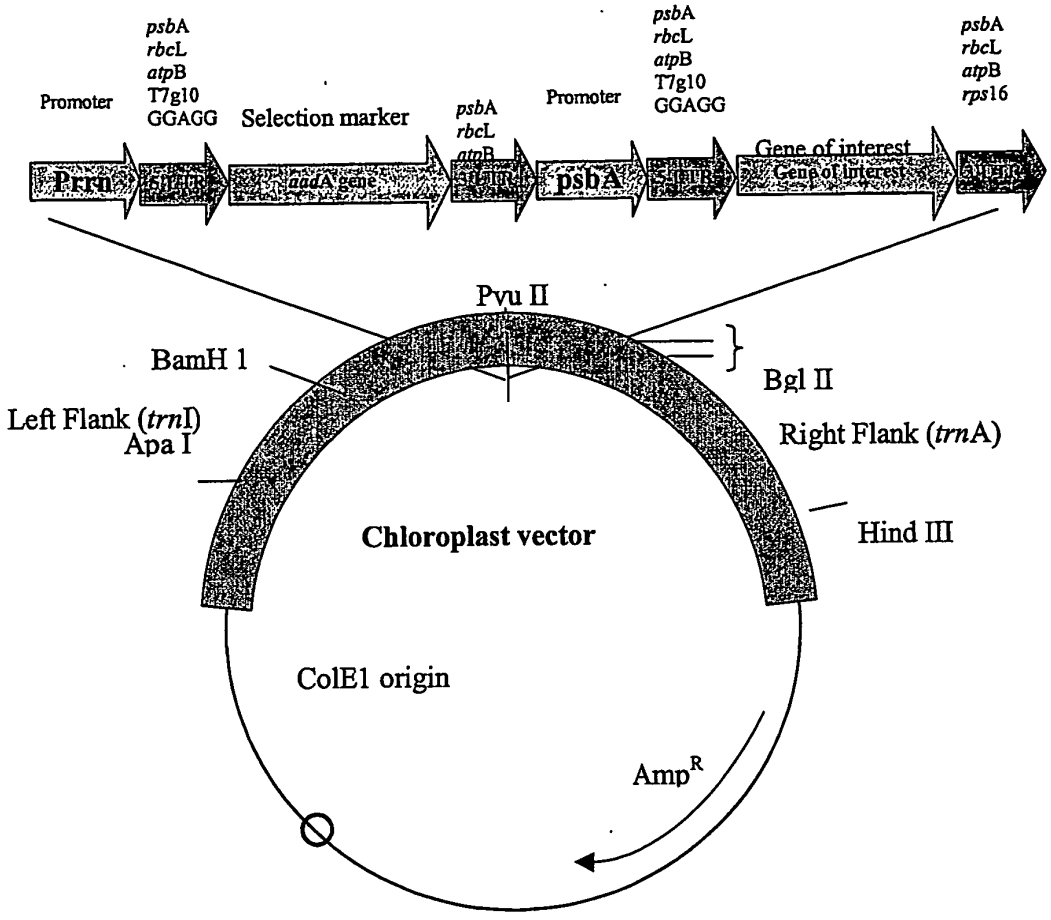

psbA
rbcL
atpB
T7g10
GGAGG
Promoter
Selection marker
psbA
rbcL
atpB
Promoter
psbA
rbcL
atpB
T7g10
GGAGG
psbA
rbcL
atpB
rps16
Prrn
aadA gene
psbA
Gene of interest
Gene of interest
Pvu II
BamH 1
Bgl II
Left Flank (trnI)
Apa I
Right Flank (trnA)
Chloroplast vector
Hind III
ColE1 origin
Amp^R

FIG 38